Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

TIN Inc., dba Temple-Inland
TIN Inc dba Temple-Inland - Southwest Louisiana Lumber Operations
Ragley, Beauregard Parish, Louisiana
Agency Interest Number: 12483
Activity Number: PER20040001, PER20070001
Proposed Permit Number: 0320-00018-V2, PSD-LA-724

I. APPLICANT

Company:
TIN Inc., dba Temple-Inland
P.O. Drawer N
303 S. Temple Dr.
Diboll, TX 75941

Facility:
Southwest Louisiana Lumber Operations (SWLA)
3442 Hwy 12
Six miles southwest of Ragley, Louisiana. Approximate UTM coordinates are 468.79 kilometers East, 3372.54 kilometers North, zone 15.

II. FACILITY AND CURRENT PERMIT STATUS

TIN Inc., dba Temple-Inland owns and operates the Southwest Louisiana Lumber Operations (SWLA) facility, a sawmill near the town of Ragley in Beauregard Parish, Louisiana. The SWLA facility produces dimensional pine lumber and wood chips. The site was originally permitted under Permit No. 0320-00018-00, issued on September 30, 1988.

With Permit No. 0320-00018-V0, issued June 29, 2000, Temple Inland Forest Products Corporation (TIFPC) added a fourth dry kiln. Other additions included a feed roller between the sharp chipper heads and the band mills, a shape sawing gang, and ten green sorter bins. The board edge scanner, in-feed, saw box, and green trimmer sorter line were upgraded. High speed belts replaced chains at the log bucking station. An additional 3600 square feet of finished lumber warehouse capacity was also added.

The current operating permit for this facility, 0320-00018-V1, was issued on February 1, 2001. This permit modification included provisions to raise the maximum operating rates

for the four wood-fired dry kilns (along with the corresponding emissions) to 70.0 million bd-ft/yr and 8,760 hours per year. The aggregate throughput cap of 198 MM bd-ft/yr on the kilns and permitted emissions remained unchanged.

The SWLA facility is a designated Part 70 source. Sources which operate under the current Part 70 permit include the following:

Permit No.	Unit or Source	Date Issued
0320-00018-V1	EP-1P - Lumber Planer, Cut-off Saws, and Reclaim Hog Baghouse EP-2F - Ash Collection System Baghouse EP-2P - Fuel Silos Cyclone KILN CAP – Wood-fired Dry Kilns EP-3K - Wood-Fired Dry Kiln No. 1 EP-4K - Wood-Fired Dry Kiln No. 2 EP-5K - Wood-Fired Dry Kiln No. 3 EP-6K - Wood-Fired Dry Kiln No. 4 FWP-1 - Caterpillar 3208 Fire Water Pump Engine GASTANK - Gasoline Storage Tank HANDFUG - Material Handling Fugitives	February 1, 2001

The SWLA facility submitted timely applications for both the Part 70 permit renewal and the No. 5 Wood-Fired Dry Kiln SWLA Expansion Project. The emission sources after the expansion project is complete are listed below.

Permit No.	Unit or Source	
0320-00018-V2 PSD-LA-724	UNF001	SWLA Lumber Operations
	EQT003	EP-1P - Lumber Planer, Cut-off Saws, and Reclaim Hog Baghouse
	EQT004	EP-2F - Ash Collection System Baghouse
	EQT005	EP-2P - Fuel Silos Cyclone
	EQT006	EP-3K - Wood-Fired Dry Kiln No. 1
	EQT007	EP-4K - Wood-Fired Dry Kiln No. 2
	EQT008	EP-5K - Wood-Fired Dry Kiln No. 3
	EQT009	EP-6K - Wood-Fired Dry Kiln No. 4
	EQT010	FWP-1 - Caterpillar 3208 Fire Water Pump Engine
	EQT011	GASTANK - 1,000 gal Gasoline Storage Tank
	EQT012	EP-7K - Wood-Fired Dry Kiln No. 5
	FUG001	HANDFUG - Material Handling Fugitives
	FUG002	HAULROAD - Haul Roads
	GRP002	K-CAP - Kiln CAP

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application and Emission Inventory Questionnaire were submitted by TIFPC on December 30, 2004 requesting a Part 70 operating permit renewal. TIN Inc., dba Temple Inland, received a change of owner/operator letter for the SWLA facility on June 1, 2005.

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An addendum to the original application dated December 6, 2006, July 20 and October 26, 2007, and June 27, 2008, was also received.

Project

The SWLA facility is a high production, low manpower sawmill. The sawmill is currently designed to produce up to 198 MM bf/yr on a nominal basis.

A forty-ton, pedestal mounted crane and a portable loader are used to unload and handle logs delivered to the site by trucks. Tree-length logs are stored in the log yard adjacent to the plant site. Logs under the crane are stored under wetdeck conditions using water recycle from the log irrigation pond. Wetdecking in the adjacent satellite log yard is accomplished using once through well water.

Initially, logs are debarked and cut into usable lengths. Bark from the debarker and log conveyor, sawdust from the cutoff saws and sawmill, and tops, chunks, and tree debris are collected and conveyed by a chain conveyor to a bark hog. The hog, using an enclosed bottom, gravity discharge, delivers the processed wood byproducts to the sawdust truck bin via a belt conveyor.

After debarking and cutting to usable lengths, large tree tops of pulpwood are converted to chips by the topwood chipper. This chipper is also an enclosed bottom, gravity discharge type unit. Chips are collected in a surge chamber and deposited directly into a closed chain/vibrating pan/belt conveyor system for delivery to the pulpwood chip storage bins (after screening) for truck and railcar loading. Larger pieces are processed by two additional enclosed bottom, gravity discharge type chippers and delivered by conveyors to the chip storage bins (after screening) for truck and rail car loading.

The lower floor of the sawmill is a combination of chain and/or vibration conveyor systems. This equipment provides a clean basement area, thus minimizing the possibility of fugitive dust emissions. Wet sawdust and chips fines are conveyed to the wet wood fuel/bark collection system for delivery to the sawdust truck bin. This material is shipped to other sites by truck for use as boiler fuel or raw material. There is no pneumatic conveyance of any of this material. Transfer of wood chips, wet sawdust, and bark is accomplished using slow moving chains, covered belt conveyors, or vibrating conveyors.

After exiting the sawmill and prior to being kiln dried, rough-cut green lumber is transferred to the sorter building for accumulation by size. Utilizing optimized systems of lasers and photocells and computer analyzers, the green lumber is trimmed to length, width, and thickness by the green sorter system into bundles that can be transformed by forklift to the green storage area, or directly to the green stacker. Alternatively, some of this lumber may be loaded on trucks and shipped offsite.

Lumber is dried in one of five direct fired, high temperature kilns. The dry kilns are heated by the direct introduction of combustion gases from a dry wood suspension burner into the kiln air recirculation plenum chamber. The burners are fired by biomass fuel in the form of shavings, sawdust, and trim from the planer mill. The fuel material is hammer-milled or ground and screened to insure that it is properly sized for the burner systems. There are no exhaust stacks or bypass stacks associated with this process; air emissions are fugitives from the kiln door seals and from the operation of humidity

controlled relief vents in the kiln roof. Fugitive emissions are minimized by recirculation and reheating of kiln air.

After drying, lumber is transferred to a cooling shed and allowed to equalize with ambient temperature and humidity. Rough lumber is then loaded onto a conveyor that feeds the planer machine and trimmer for finishing. Kiln-dried wood byproducts from the planer machine and trim saws are picked up by a low pressure, high volume suction system for transfer to the dry wood shavings storage bin.

Dry shavings/air separation occurs in a high efficiency planer cyclone with bottom discharge to either a shavings truck bin or the fuel storage system. Exhaust from this cyclone is vented through a fabric filter to minimize particulate emissions at EQT003, EP-1P - Lumber Planer, Cut-off Saws, and Reclaim Hog Baghouse. Dry shavings are hauled from the bin by truck to other mills for use as raw material.

Alternatively, dry wood shavings may be conveyed via a closed screw conveyor to the adjacent fuel preparation system for screening, refining, and transfer via high pressure, low volume pneumatic conveying system to one of two dry wood fuel storage silos. Material/conveying air separation at the silos is accomplished by EQT005, EP-2P - Fuel Silos Cyclone.

Ash contained on the rough lumber is dislodged during the planer in-feed process. The bulk of this ash accumulates on the planer room floor and can be swept up. Some ash material is captured by a high pressure suction system that vents to the EQT004, EP-2F - Ash Collection System Baghouse. A minor amount is discharged to the atmosphere through an adjacent building vent.

Finally, dry finished lumber is graded, sorted, warehoused, and shipped offsite via rail cars and trucks. The sawmill is currently designed to produce 198 million board feet annually (nominal basis) of dimensional lumber, excluding green one-inch production.

No. 5 Wood-Fired Dry Kiln SWLA Expansion Project

TIN Inc., dba Temple Inland, has projected an increase in the market demand for dimensional lumber products. To meet this demand, the SWLA facility proposes to increase the production capacity of the existing four wood-fired dry kilns, EQT006, EP-3K - Wood-Fired Dry Kiln No. 1, EQT007, EP-4K - Wood-Fired Dry Kiln No. 2, EQT008, EP-5K - Wood-Fired Dry Kiln No. 3, and EQT009, EP-6K - Wood-Fired Dry Kiln No. 4, from 198,000 M bf/yr to 203,600 M bf/yr. The SWLA facility is also proposing to add a fifth wood-fired dry kiln, EQT012, EP-7K - Wood-Fired Dry Kiln No. 5, with the same capacity (50,900 M bf/yr) as the existing wood-fired dry kilns, bringing the total production capacity of the facility to 254,500 M bf/yr .

As part of this project, the SWLA facility proposes to modify the existing lumber planer, EQT003, EP-1P - Lumber Planer, Cut-off Saws, and Reclaim Hog Baghouse, by adding cutting knives to increase the rate of production. Currently, the Lumber Planer has sixteen cutting knives and averages 1,200 to 1,250 feet per minute. The proposed change adds four cutting knives for a total of twenty cutting knives. This modification increases the rate of production to a potential maximum of 1,500 feet per minute.

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The SWLA facility proposes to update the particulate matter emission factors (PM and PM_{10}) and emission rates for EQT005, EP-2P - Fuel Silos Cyclone. The previous emission factor had been based on engineering judgment. The source emissions have been updated to use an emission factor based on information provided by the National Council for Air and Stream Improvement (NCASI) for the Dry Lumber Trim Group and the project production increase.

The SWLA facility proposes to update NO_X and CO emission factors for the kilns to be representative of direct-fired kilns. The source emissions for wood fuel firing have been updated to use emission factors based on vendor data for CO and information provided by NCASI for NO_X.

Finally in this modification, the SWLA facility will add FUG002, HAULROAD - Haul Roads, as an emission source. The emergency back-up diesel engine will be added as an Insignificant Activity per LAC 33:III.501.B.5.D.

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Permitted Air Emissions

Estimated emissions in tons per year are as follows:

Pollutant	0320-00018-V1	0320-00018-V2	Change
PM_{10}	69.38	67.26	- 2.12
SO_2	1.50	8.87	+ 7.37
NO_X	29.84	40.35	+ 10.51
CO	209.98	202.43	- 7.55
VOC *	267.65	364.36	+ 96.71

* VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	0320-00018-V1	0320-00018-V2	Change
Acetaldehyde	-	3.56	+ 3.56
Acrolein	-	0.791	+ 0.791
Benzene	-	0.09	+ 0.09
Dibutyl Phthalate	-	0.01	+ 0.01
Formaldehyde	2.48	5.09	+ 2.61
Methanol	25.74	20.36	- 5.38
n-Hexane	-	0.10	+ 0.10
Naphthalene	-	0.03	+ 0.03
Propionaldehyde	-	0.13	+ 0.13
Total	28.22	30.161	+ 1.941

* Other VOC (TPY):	239.43	334.06	+ 94.63

Non-VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	0320-00018-V1	0320-00018-V2	Change
Barium	-	1.699	+ 1.699
Chromium	-	0.009	+ 0.009
Copper	-	0.017	+ 0.017
Dichloromethane	-	0.12	+ 0.12
Hydrogen Chloride	-	0.12	+ 0.12
Manganese	-	0.64	+ 0.64
Tetrachloroethylene	-	0.02	+ 0.02
1,1,1-Trichloroethane	-	0.01	+ 0.01
Zinc	-	0.09	+ 0.09
Total		2.725	+ 2.725

Supplemental LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):

Pollutant	0320-00018-V1	0320-00018-V2	Change
Cobalt	-	0.15	+ 0.15

Phosphorus	-	0.04	+ 0.04
Total	-	0.19	+ 0.19

Proposed Permit

TIN Inc. dba Temlple-Inland proposes a renewal and major modification to Permit No. 0320-00018-V1. Permit No. 0320-00018-V2 is the proposed renewal and modification of the Part 70 operating permit 0320-00018-V2 for the SWLA facility. Permit No. PSD-LA-724 is the proposed permit for the No. 5 Wood-Fired Dry Kiln SWLA Expansion Project.

IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.